

METHOD AND APPARATUS FOR FORMING PRINTED CIRCUIT BOARDS
USING IMPRINTING AND GRINDING

Abstract of the Disclosure

5 A method for forming a conductive circuit on a substantially non-conductive
substrate includes indenting a major surface of a substrate with a plurality of
features, plating the major surface and the indentations formed with a conductive
layer, and removing a portion of the conductive layer leaving at least one of the
10 plurality of the indentations filled with conductive material separated from at least
one other of the plurality of the indentations filled with conductive material
separated by non-conductive material. An electrical device formed includes a sheet
of insulative material having grooves therein. The sheet of insulative material has a
first planar surface, and a second planar surface. A conductive material is
15 positioned within the grooves. The conductive material within the grooves forms
electrical traces in the electrical device. The conductive material within the grooves
fills the groove and includes a surface coplanar with at least one of the first planar
surface or the second planar surface. Other electrical devices can be formed using
multiple sheets formed with electrical traces.

"Express Mail" mailing label number: EV332571245US

Date of Deposit: June 30, 2003

This paper or fee is being deposited on the date indicated above with the United
States Postal Service pursuant to 37 CFR 1.10, and is addressed to the Mail Stop
Patent Application, Commissioner for Patents, P.O.Box 1450, Alexandria, VA
22313-1450.